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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/610,496	06/30/2003	Jered Donald Aasheim	MS1-1466US	5314
22801	7590	07/18/2006	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			KIM, HAROLD J	
			ART UNIT	PAPER NUMBER
			2181	

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/610,496	AASHEIM ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Harold Kim	2181	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 35-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*Fritz Fleming*  
**FRITZ FLEMING**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**

7/10/2006

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/26/2006 has been entered.
2. Claims 35-54 are presented for examination.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 35-54 are not limited to tangible embodiments. In view of applicants' disclosure, specification page 14, lines 6-11, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., a portable computer diskette) and intangible embodiments (e.g., any means that can propagate, or transport instructions). The system, power profiler, and power profile in claims are not limited to tangible embodiments, instead being defined as computer instructions or software instructions. In addition, all of the independent claims do not produce tangible result. As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 35-54 are rejected under 35 U.S.C. 102(e) as being anticipated by  
Cyran et al., US Pub. No.: US 2003/0191986 A1.**

5. In re claim 35, Cyran et al. shows a processor-readable storage medium [fig 1C] comprising processor-executable instructions [figs 6 and 13] configured for:

identifying a plurality of instructions [6008, fig 6; paragraph 0034, lines 5-10]  
executing on a processor [1500, fig 15; 1018, fig 1C] over an interval of time [measure single range, fig 6], wherein the plurality of instructions corresponding to one or more applications executing on the processor [1000, .DVR FILE, in fig 1C];

identifying one or more thread and process states [task handle, figs 21 and 22]  
corresponding to the identified instructions [figs 21 and 22];

receiving a plurality of instantaneous power consumption level indications over the interval of time [single range real-time, 6012, fig 6] from a power measurement circuit [6020, fig 6; 1022, fig 1C]; and

correlating ones of the instantaneous power consumption values with  
corresponding ones of the identified instructions and corresponding ones of the  
identified thread and process states so as to derive a power profile for the interval of

time [6020, fig 6; fig 13; 2108, fig 21].

6. In re claim 36, Cyran et al. shows interrupting the processor [6002, fig 6];  
sampling a program counter of the processor [1500, fig 15];  
scanning a lookup table to find an address indicated by the program counter  
[6008, fig 6; 1500, fig 15], and  
determining an instruction located at the address [1704, fig 17].
7. In re claim 37, Cyran et al. shows querying the power measurement circuit [6010,  
6012, fig 6]; and  
receiving digital power readings from the power measurement circuit based on  
the querying [6020, fig 6; fig 9; 1022 fig 1C; fig 13].
8. In re claim 38, Cyran et al. shows receiving digital power readings from the  
power measurement circuit at preset time intervals [1014, fig 1C].
9. In re claim 39, Cyran et al. shows the instantaneous power consumption values  
correspond to respective measured amounts of electrical power consumed during  
execution of the corresponding identified instruction on the processor [fig 13].
10. In re claim 40, Cyran et al. shows the power profile is configured to be output to a  
user in a format selected from the group comprising: a table [fig 13]; and a graph [fig  
14].
11. In re claim 41, Cyran et al. shows outputting the power profile to a user in the  
form of a graphical display [fig 14] including:  
at least some of the instantaneous power consumption values plotted with

respect to time [fig 14]; and

at least some of the identified instructions [SineLookup, fig 14] plotted with respect to time.

12. In re claim 42, Cyran et al. shows the plotted identified instructions are formatted so as to visibly distinguish the identified thread and process states corresponding thereto [2108, fig 23; fig 14. The examiner notes that the format of displaying is not patentable subject matter.].

13. In re claim 43, Cyran et al. shows at least one identified thread and process state is characterized by process run [2102, 2104 in fig 23].

14. In re claim 44, Cyran et al. shows a computer [1018, fig 1A].

15. In re claim 45, Cyran et al. shows a computer [fig 1A] comprising a power profile [1002, fig 1A] configured to:

identify thread and process states [task handle, figs 21 and 22] corresponding to software instructions [6008, fig 6; paragraph 0034, lines 5-10, 1500, fig 15; 1018, fig 1C; 6008, fig 6; paragraph 0034, lines 5-10] executing on a processor [CPU, fig 2; 1000, .DVR FILE ,1018, fig 1C];

receive instantaneous power consumption data [real-time, 6012, fig 6] corresponding to the execution of the software instructions [figs 13, 21, and 23]; and

correlate the instantaneous power consumption data with the software instructions and the thread and process states such that the software instructions and their corresponding identified thread and process states are associated with

instantaneous power consumption values indicating amounts of electrical power consumed over time during the executing of the software instructions [6020, fig 6; fig 13; 2108, fig 21].

16. In re claim 46, Cyran et al. shows a look up table [6008, fig 6; paragraph 0150], the power profile further configured to monitor a program counter [paragraph 0150, line 3; 1500, fig 15] on the processor and to identify the software instructions through the lookup table based on the program counter [1500, fig 15; 6008, fig 6].

17. In re claim 47, Cyran et al. shows a power profile [1002, fig 1A] having a plurality of power consumption values associated with corresponding software instructions and corresponding thread and process states so as to indicate amounts of power consumed during the execution of the software instructions [6020, fig 6; fig 13; 2108, fig 21].

18. In re claim 48, Cyran et al. shows the power profiler is configured to output the power profile to a user [figs 13 and 14].

19. In re claim 49, Cyran et al. shows the power profile is output to the user by generating a graphical user interface [figs 13 and 14].

20. In re claim 50, Cyran et al. show a system [fig 1C] comprising:

a power profiler [1002, fig 1C] configured to correlate [6020, fig 6], over time [single range, 6012, fig 6], a plurality of software instructions [6008, fig 6; paragraph 0034, lines 5-10] with corresponding instantaneous power consumption levels [real-time, 6012, fig 6] during execution of the plurality of software instructions [6020, fig 6];

a lookup table having information for identifying ones of the software instructions [6008, fig 6]; and

a power profile [fig 13] being generated by the power profiler and associating instantaneous power consumption levels [real-time, 6012, fig 6] with the identified software instructions [6010, fig 6] and one or more thread and process states corresponding to the identified software applications [6020, fig 6; fig 14; figs 21 and 22].

21. In re claim 51, Cyran et al. shows a power measurement circuit [1022, fig 1C] configured to measure the amount of power consumed during execution of the identified software instruction [6020, fig 6]; and

an analog to digital converter configured as part of the power measurement circuit to convert analog power consumption measurements into digital power consumption data [DSP (A/D), 1022, fig 1C; 6020, fig 6].

22. In re claim 52, Cyran et al. shows the power measurement circuit is a component [1010, fig 1C] of a target computing device [1018, fig 1C] on which the identified software instruction is executed.

23. In re claim 53, Cyran et al. shows the power profiler is to output the power profile to a user by generating a graphical user interface [figs 13 and 14].

24. In re claim 54, Cyran et al. shows at least some of the instantaneous power consumption values plotted graphically with respect to time [fig 14]; and

at least some of the identified instructions [SineLookup, fig 14] plotted graphically with respect to time, the plotted identified instructions formatted so as to visibly distinguish the identified thread and process states corresponding thereto [2108, fig 23; fig 14. The examiner notes that the format of displaying is not patentable subject matter.].



***Response to Arguments***

Applicant's arguments have been fully considered but they are not persuasive.

In the remarks, applicants argued in substance that Cyran does not show thread and process states corresponding to software instructions.

Examiner respectfully traverses applicants' remarks.

In the new ground of rejection as shown in above claim 35, Cyran shows thread and process states [task handle, figs 21 and 22] corresponding to software instructions [task handle, figs 21 and 22].

***Conclusion***

Any response to this action should be mailed to:

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The centralized fax number is 571-273-8300.

The centralized hand carry paper drop off location is:

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401 Dulany Street  
Alexandria, VA 22314

Any inquiry of a general nature or relating to the status of this application should be directed to the central telephone number (571) 272-2100.

Direct any inquiries concerning drawing review to the Drawing Review Branch (703) 305-8404.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold Kim whose telephone number is 571-272-4148. The examiner can normally be reached on Monday-Friday 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on 571-272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2181

HK

Harold J. Kim

Patent Examiner

July 7, 2006/HK

Fritz Fleming

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7/10/2006